

### **REMARKS/ARGUMENTS**

Reconsideration of this application is requested. This Amendment accompanies a Request for Continued Examination (RCE). The claim changes presented above are substantial to the extent that it was not believed an amendment after final would be entered because of the numbers of potential new issues raised.

Claims 1-9, 12, 13 and 17-19 are pending in the application of which only claims 12 and 19 are directed to elected subject matter, the remaining claims being withdrawn.

This Amendment responds to the issues raised in the Final Rejection of September 17, 2007 in which a new reference was cited, that is the U.S. patent to Asgharian U.S. 5,672,213.

Claim 19 has been amended in order to more particularly point out and distinctly claim that which applicants regard as their invention and to include information contained in the description of the invention in order to better define the claim and distinguish it from the applied references.

More specifically, claim 19 has been amended to include a more specific definition of the low molecular weight polyol (page 11, lines 10-13) as well as that of the high molecular weight polyol (page 12, lines 5-6) and the wall component polymer (page 12, lines 13-page 13, line 6).

Claim 19 is also amended to include a more detailed statement of the events that occur during the process within the triple-layered microcapsule that is eventually produced. This would include describing the high molecular weight polyol as providing a buffer that prevents direct contact between the enzyme and the hydrophobic wall material in the microcapsule (*see* the paragraph bridging pages 9 and 10 of the description).

Step 4, the solidifying step, is further characterized to reflect the fact that the aqueous low molecular weight polyol flows out from the inner phase through an external surface of the microcapsule while the high molecular weight polyol remains in the microcapsule (*see* also pages 9-10 of the description). Basis for the amendments made to claim 19 will thus be apparent as will the fact that the claim has been amended but does not include added subject matter beyond that originally disclosed.

Applicants continue to believe that their invention as defined by claims 12 and 19 is a patentable one that is both novel and non-obvious.

The present invention as described in the specification and claimed in amended claim 19

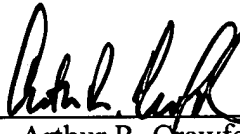
relates to a method of preparing triple-layered microcapsules containing an enzyme stabilized therein by dispersing an enzyme into a low molecular weight polyol whose molecular weight is 1,000 g/mol or less to stabilize the enzyme, re-dispersing the dispersed enzyme/polyol solution into a polymer solution containing high molecular weight polyol whose molecular weight is more than 1,000 g/mol, and emulsifying the solution to prepare polymer microcapsules. The technical feature of the present invention lies in using the low molecular weight polyol and high molecular weight polyol together, thereby the enzyme can be stabilized in the polymer.

Specifically, the enzyme is firstly stabilized by the low molecular weight polyol, and the high molecular weight polyol acts as buffer that prevents direct contact between the enzyme and the hydrophobic polymer wall material in the microcapsule. After that, the aqueous solvent is removed and thus a phase separation is formed, and during this separation, the low molecular weight polyol flows out to the outer aqueous phase through an external interface of the microcapsule, due to its high polarity, and high molecular weight polyol remains in the microcapsule. At the conclusion of the process, the microcapsule is composed of triple layers in which the enzyme forms the internal core, hydrophobic high molecular weight polyol surrounds the enzyme, and finally the wall-component polymer forms the outer wall (*see* pages 9-10 of the specification). Neither of the applied references disclose these technical features.

From the above discussion it will be apparent that applicants' claims patentably distinguish from the disclosure of Mathiowitz et al when considered alone or taken in combination with the newly cited Asgharian. Reconsideration and favorable action are solicited. Should the examiner require further information, please contact the undersigned.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By:   
Arthur R. Crawford  
Reg. No. 25,327

ARC:eaw  
901 North Glebe Road, 11th Floor  
Arlington, VA 22203-1808  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100